

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-25 (canceled)

26. (presently amended) A light applicator with a diffuser which is attachable to a light guide and in which different diffusion regions with different scattering parameters follow successively along an optical axis of the light guide prolonged into the [diffuser] diffuser and in which the diffusion regions will overlap with respect to a line-of-sight aligned at a right angle to the optical axis of the light guide, wherein a boundary surface between adjacent diffusion regions has the shape of a laminar flow profile.
27. (original) A light applicator according to claim 26, wherein the boundary surface is formed in a paraboloidal way between the diffusion regions
28. (original) A light applicator according to claim 26, whose diffuser comprises a mirror element at its distal end.
29. (original) A light applicator according to claim 26, wherein the scattering probability increases towards the distal end due to the chosen scattering parameters in the diffusion regions.
30. (original) A light applicator according to claim 29, wherein the concentration of scattering centers as averaged over the cross-sectional surface area increases along the optical axis towards the distal end of the diffuser.
31. (original) A light applicator according to claim 26, whose diffuser has a homogeneous distribution of light along the optical axis as a result of the scattering parameters in the diffusion regions.
32. (original) A light applicator according to claim 26, wherein the diffuser is associated with reflection element by which the light emitted by the diffuser can be guided in predetermined directions
33. (original) A light applicator according to claim 32, wherein the reflection element is spherical segment which is applied on the diffuser and which is provided on one outer side with a layer reflecting the light.
34. (presently amended) A light applicator according to claim 32, wherein the transition between the light-emitting surface of the reflection element and the light-emitting surface of the diffuser has a conical nose ~~[is provided with a configuration which is specific to the organ]~~.
35. (presently amended) A light applicator according to claim 32, wherein the distribution of [the] power density of [the] light emitted by the diffuser [diffuser] along the optical axis has a local maximum in the region of the reflection element as a result of [the] chosen scattering parameters in [the] proximal diffusion regions.
36. (original) A light applicator according to claim 35, wherein the concentration of the scattering centers averaged over the cross section has a local maximum, in the region of the reflection element.